

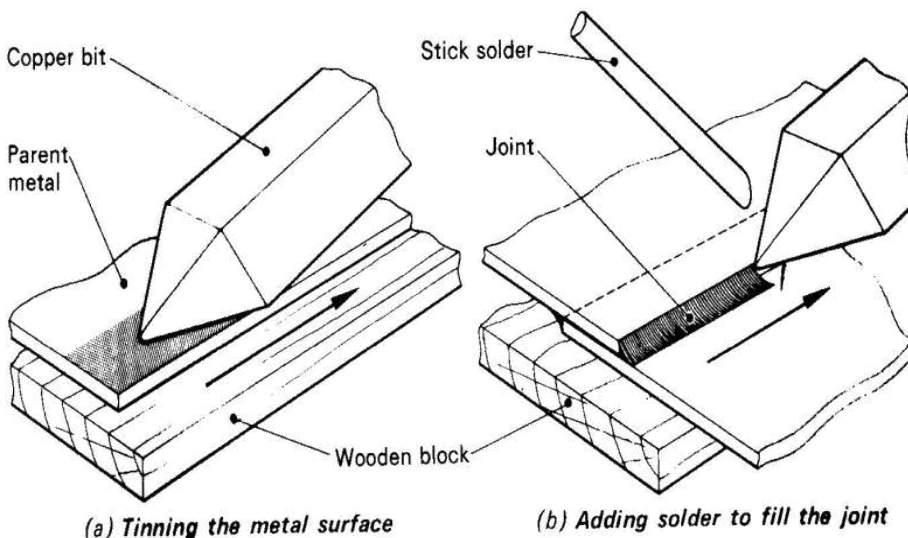
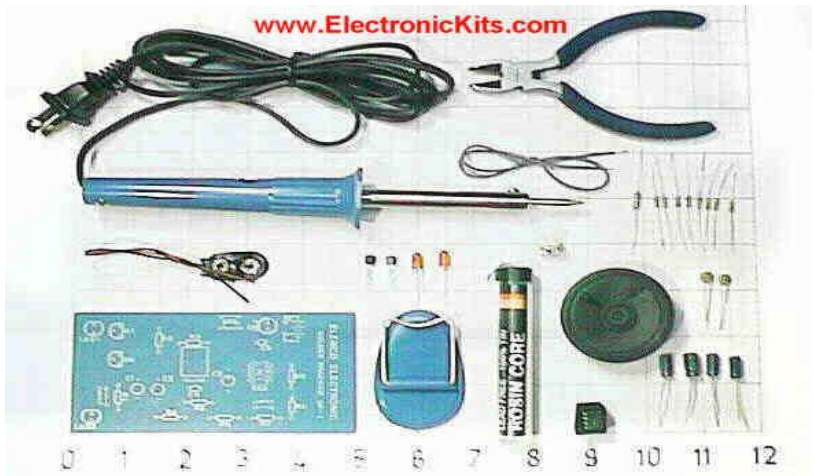


WORKSHEET NO: 18

Subject: Basic Technology	Year/Level: 10
Topic: junctions and process [metal work joint]	

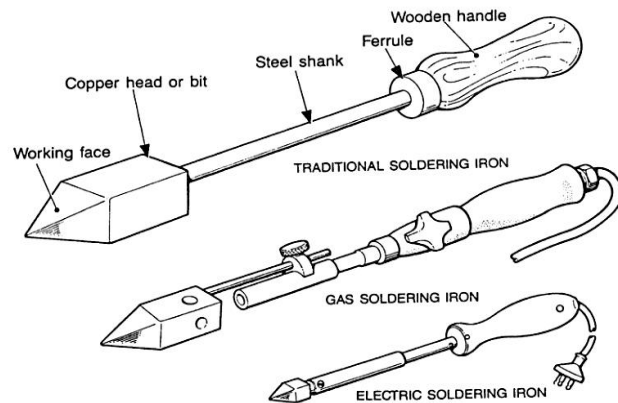
Soldering

Soldering is a method of joining metal by using an alloy having a lower melting point than the metal being joined. Good for joining dissimilar materials. Most common solders are lead-tin alloys. The solder is an alloy of lead and tin that melts at a relatively low temperature, from 350 to 450 degrees, and the source of heat may be an electric soldering gun, an electric soldering iron or a portable propane torch.



Soldering irons have copper bits because copper has an attraction for

solder, has a high thermal capacity, it malleable, soft metal and is a good conductor of heat. It is a tool used to transfer heat and melted solder into suitably designed metallic connections and sheet metal joints.

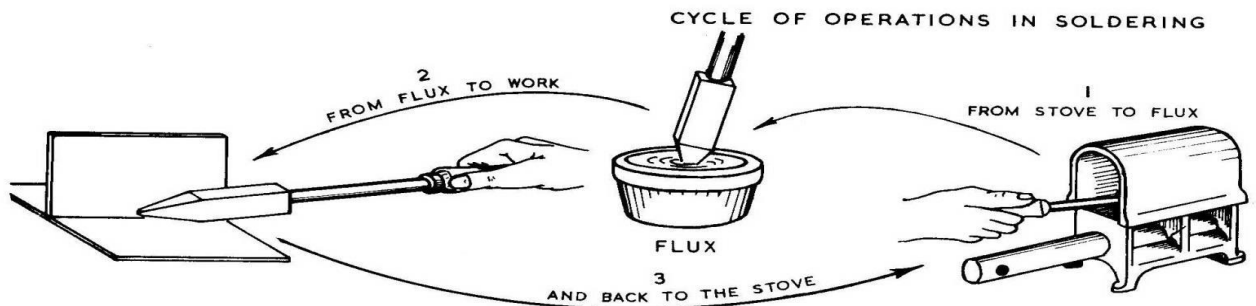


The process of soldering involves:

- (i) Tinning the metal surface.
- (ii) Filling the space between the tinned surfaces with solder.

A fluxing agent is used to assist the flow of solder and increase bonding strength. Fluxes are of two general types, zinc chloride and resin. The functions of a flux are:

- (i) They keep the metal clean during heating.
- (ii) They break down the surface tension of the solder enabling it to flow.



REVIEW QUESTIONS

- 1. Name the **two** processes of soldering. (2 marks)
- 2. Sketch a soldering iron and name its parts and write down its uses. (6 marks)